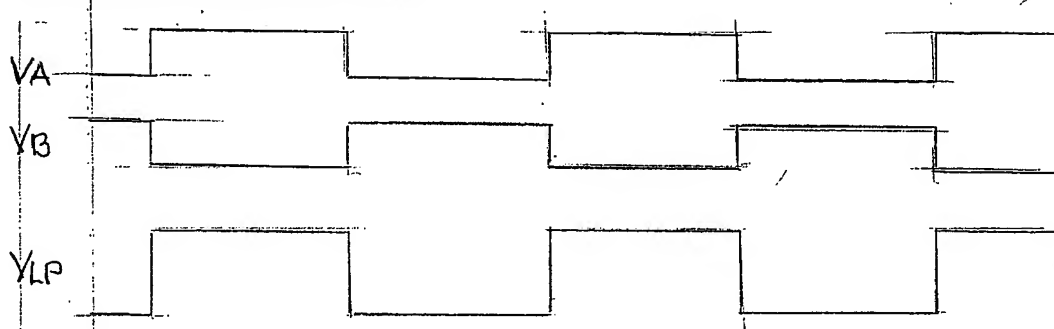


A) SQUARE WAVE DRIVE



B) HIGH EFFICIENCY DRIVE

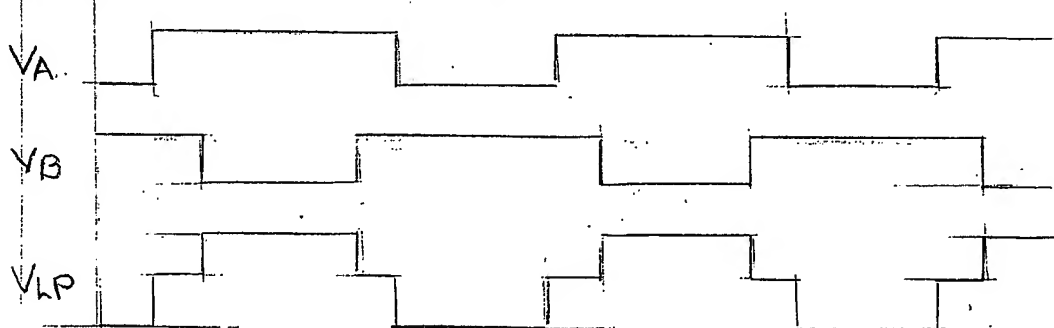


Fig 2

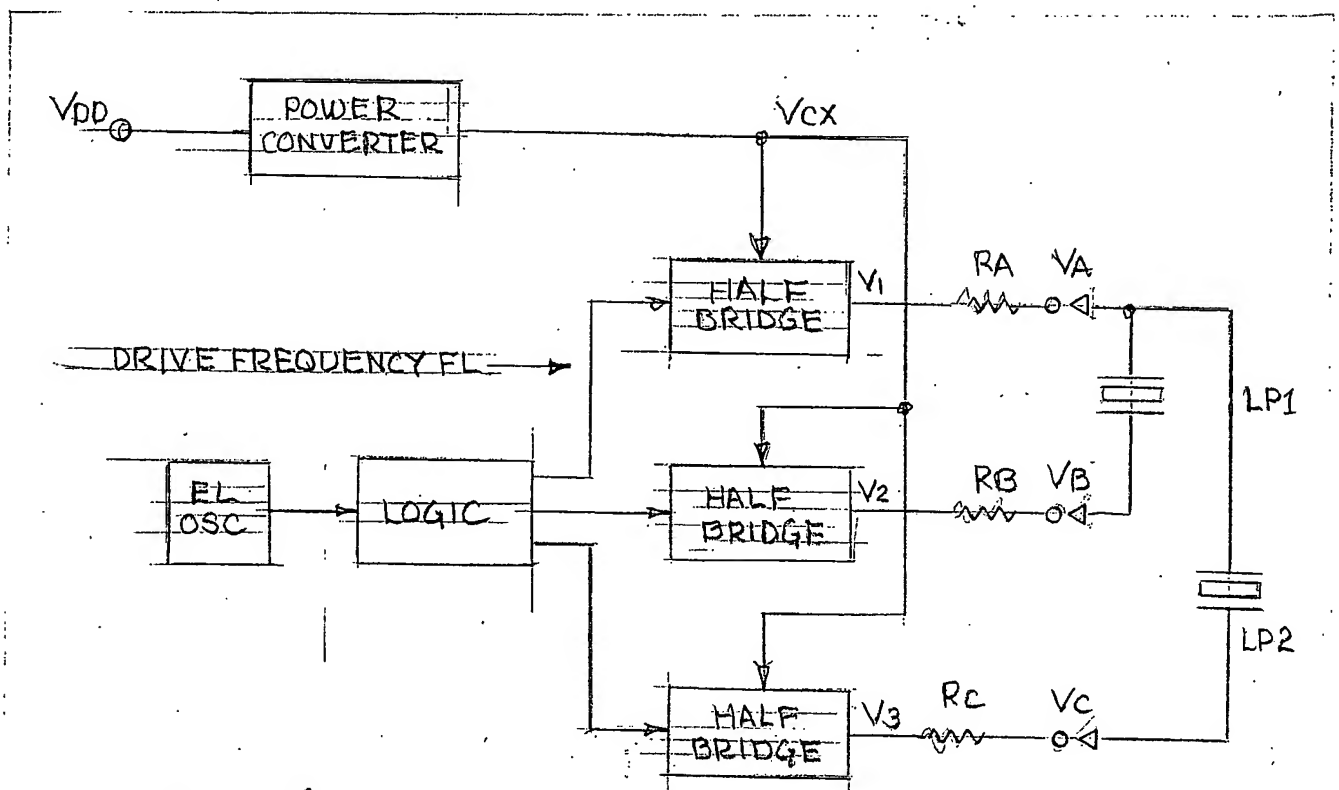


FIG. 3 MULTIPLE OUTPUT EL LAMP DRIVER

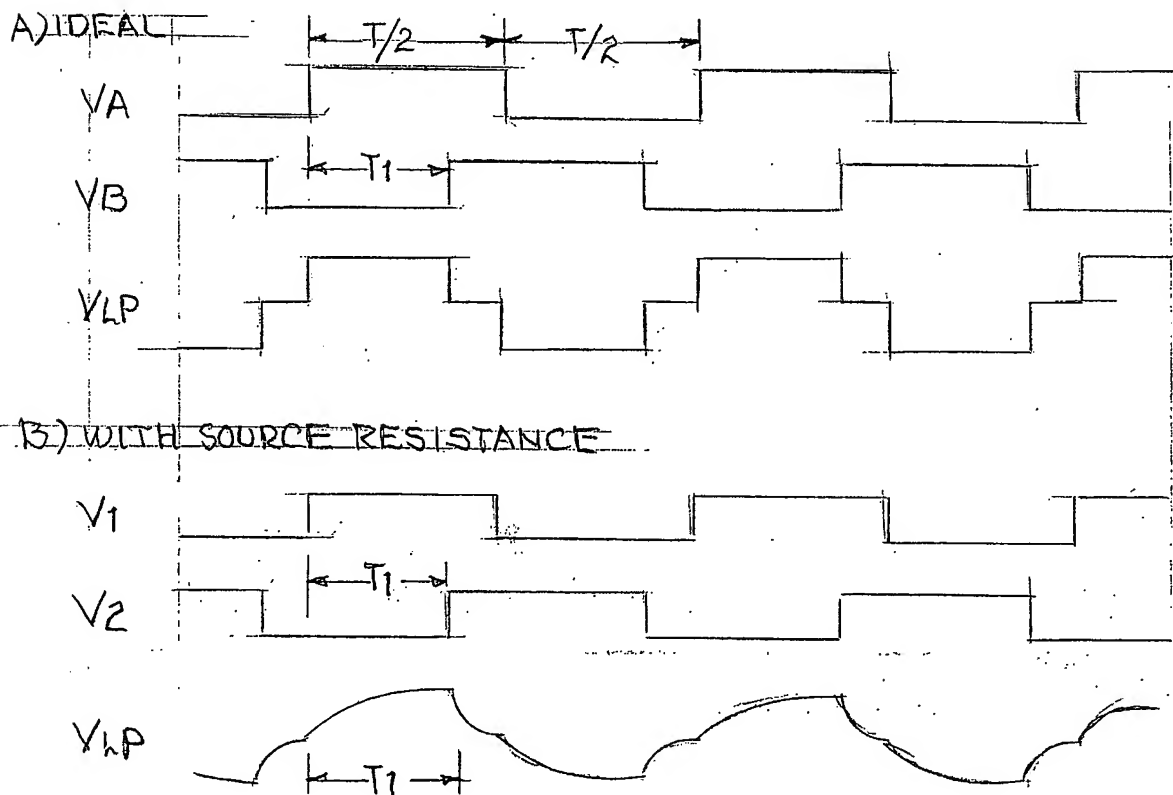


FIG. 4 PHASE SHIFTED DRIVE WAVEFORMS

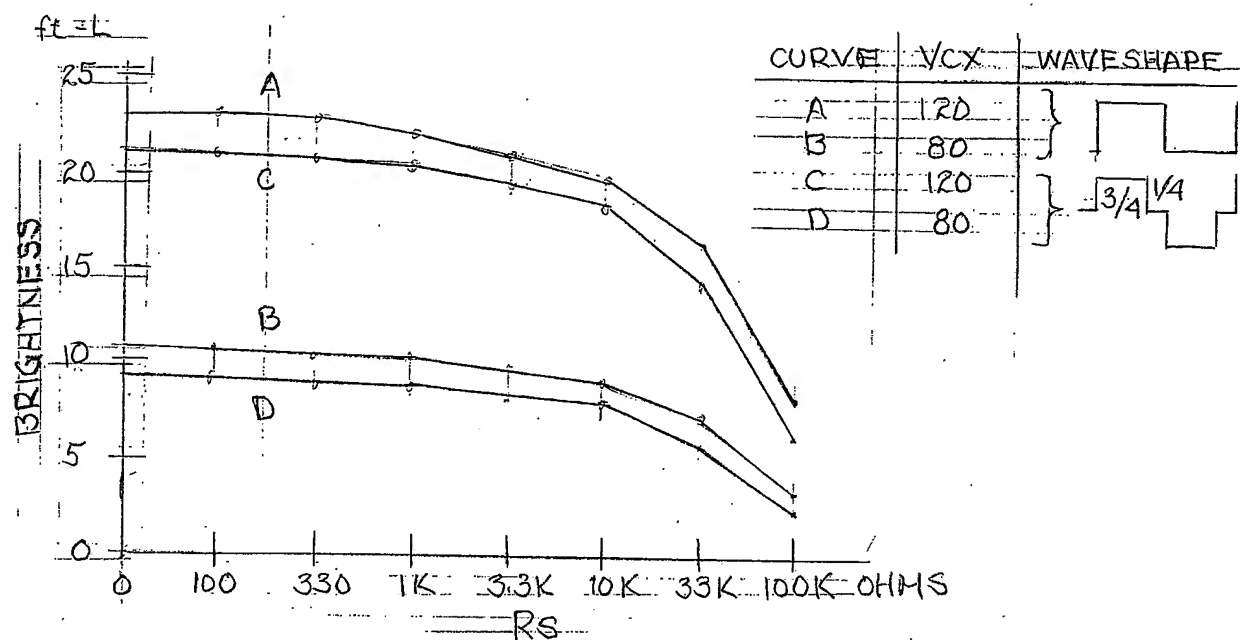


FIG. 5 LAMP BRIGHTNESS VS SERIES RESISTANCE R_s

$F = 500 \text{ Hz}$ 19X50mm LAMP

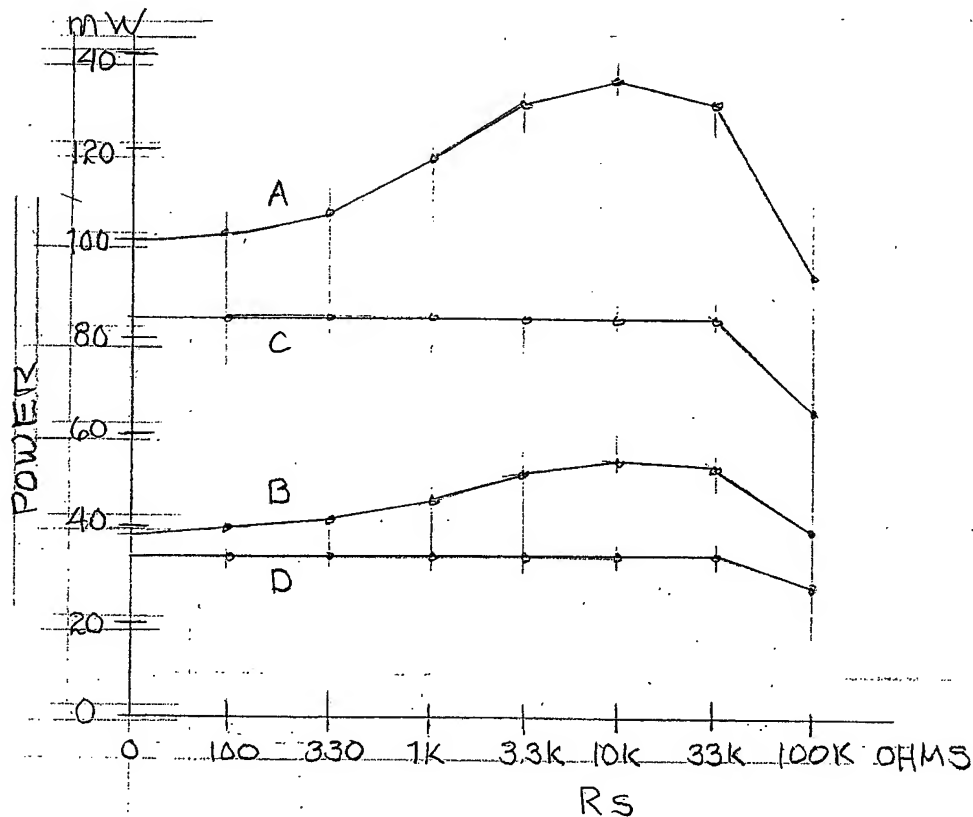


FIG. 6 LAMP POWER VS SERIES RESISTANCE

$F = 500 \text{ Hz}$ 19X50 mm LAMP

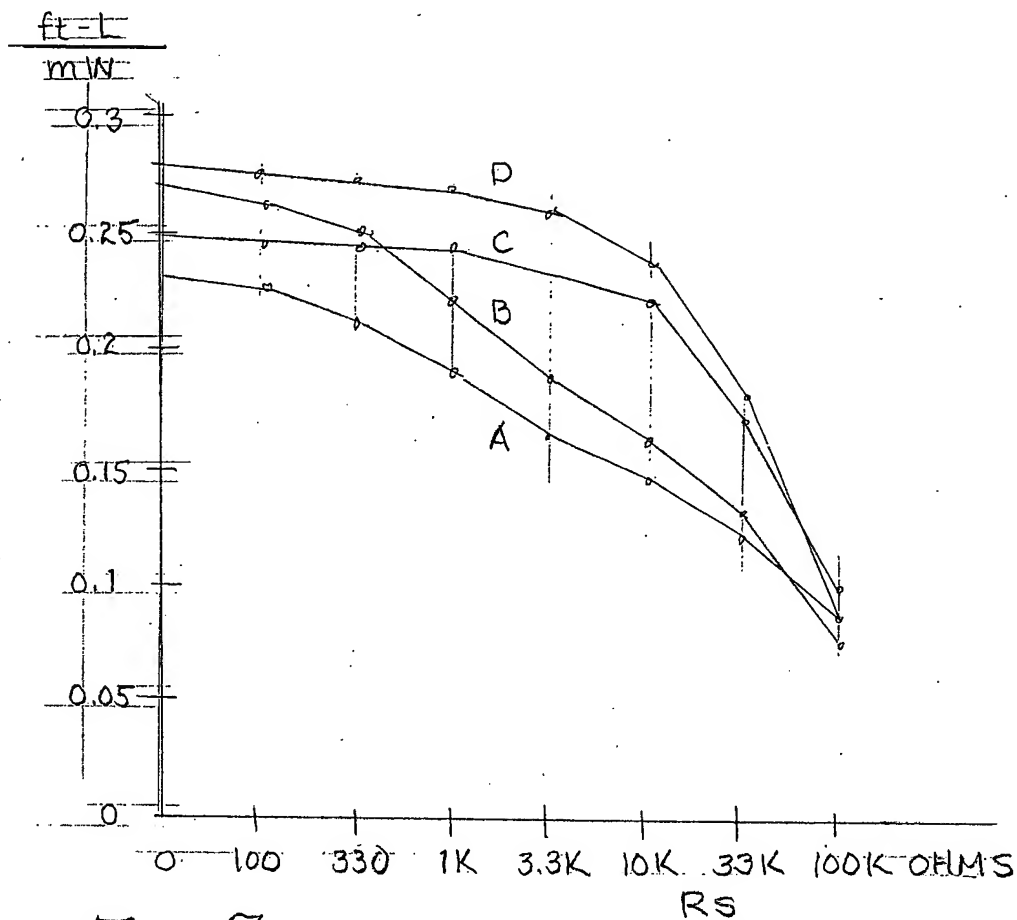


FIG. 7 LAMP EFFICIENCY VS SERIES RESISTANCE
 $F = 500 \text{ Hz}$ 19x50 mm LAMP

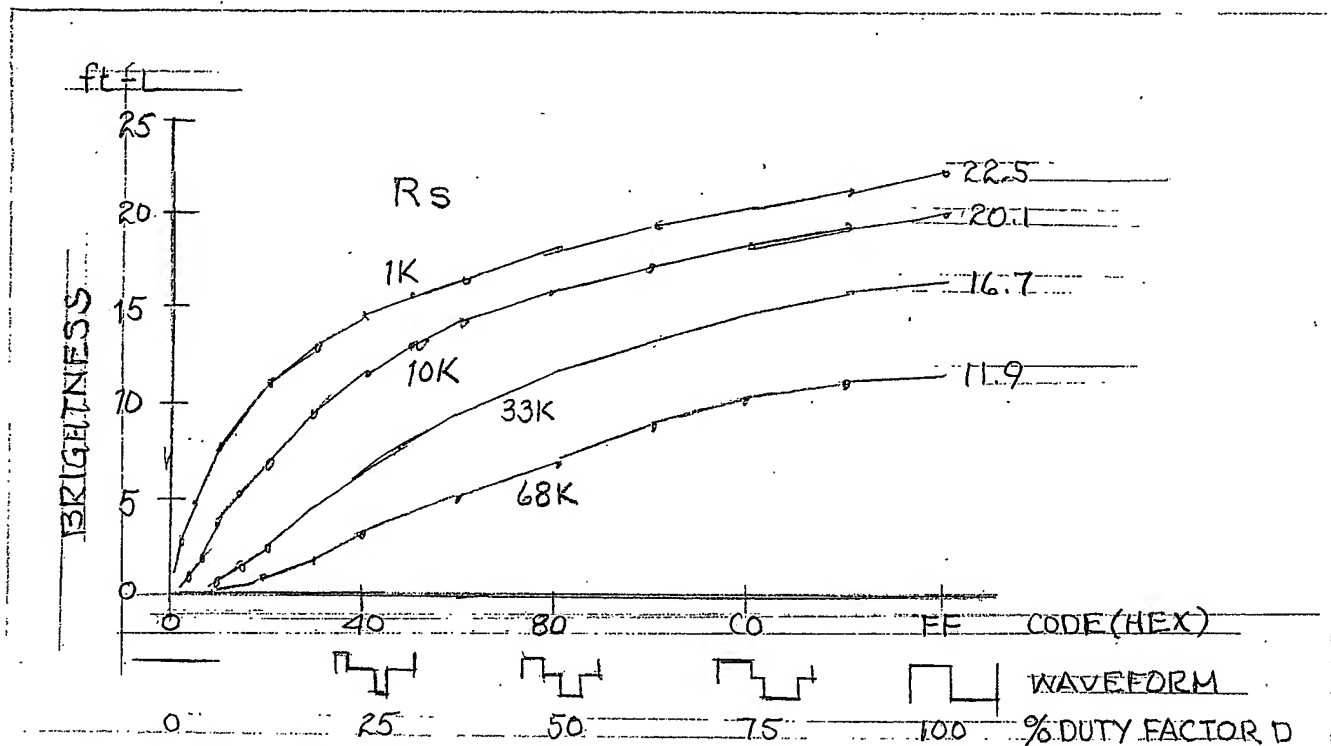


FIG. 8 LAMP BRIGHTNESS VS DUTY FACTOR

$V_{CX} = +120$ $F = 500 \text{ Hz}$ $19 \times 50 \text{ mm LAMP}$

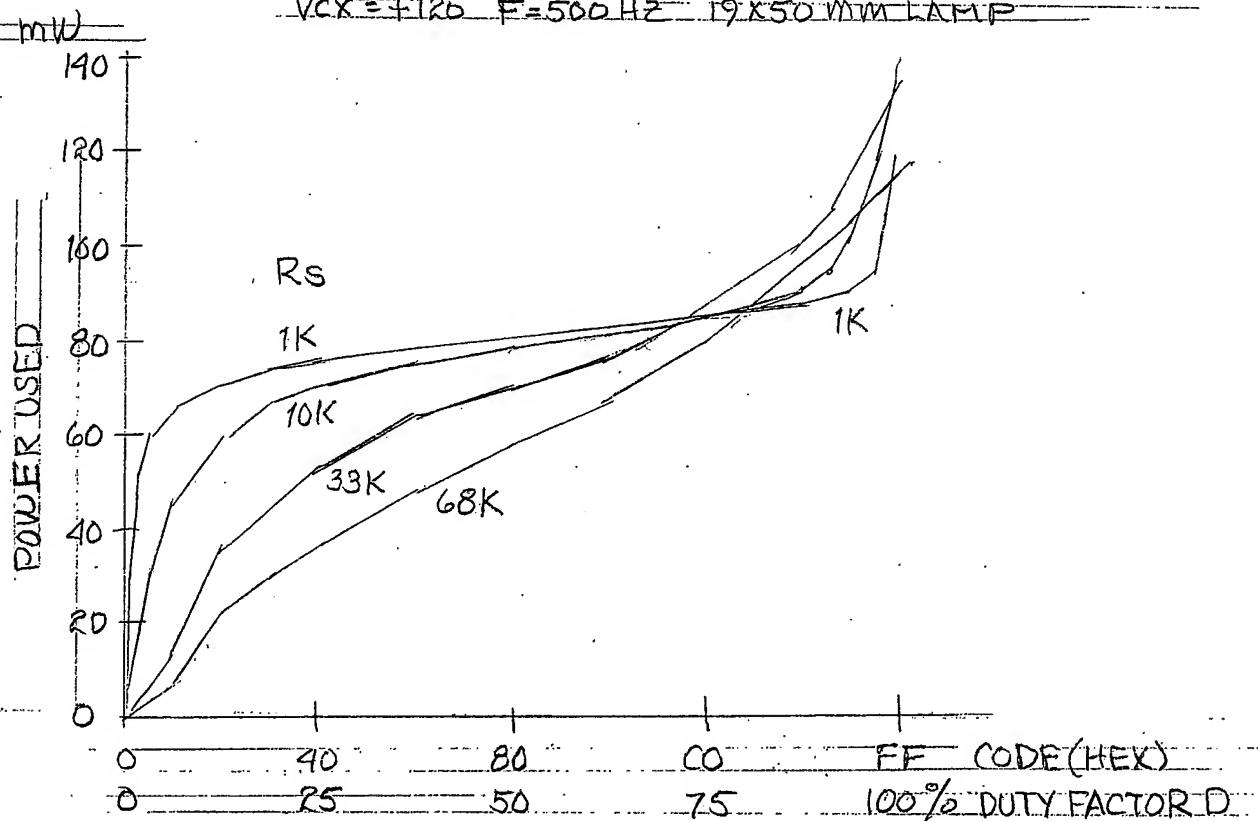


FIG. 9 LAMP POWER VS DUTY FACTOR

$V_{CX} = +120$ $F = 500 \text{ Hz}$ $19 \times 50 \text{ mm LAMP}$

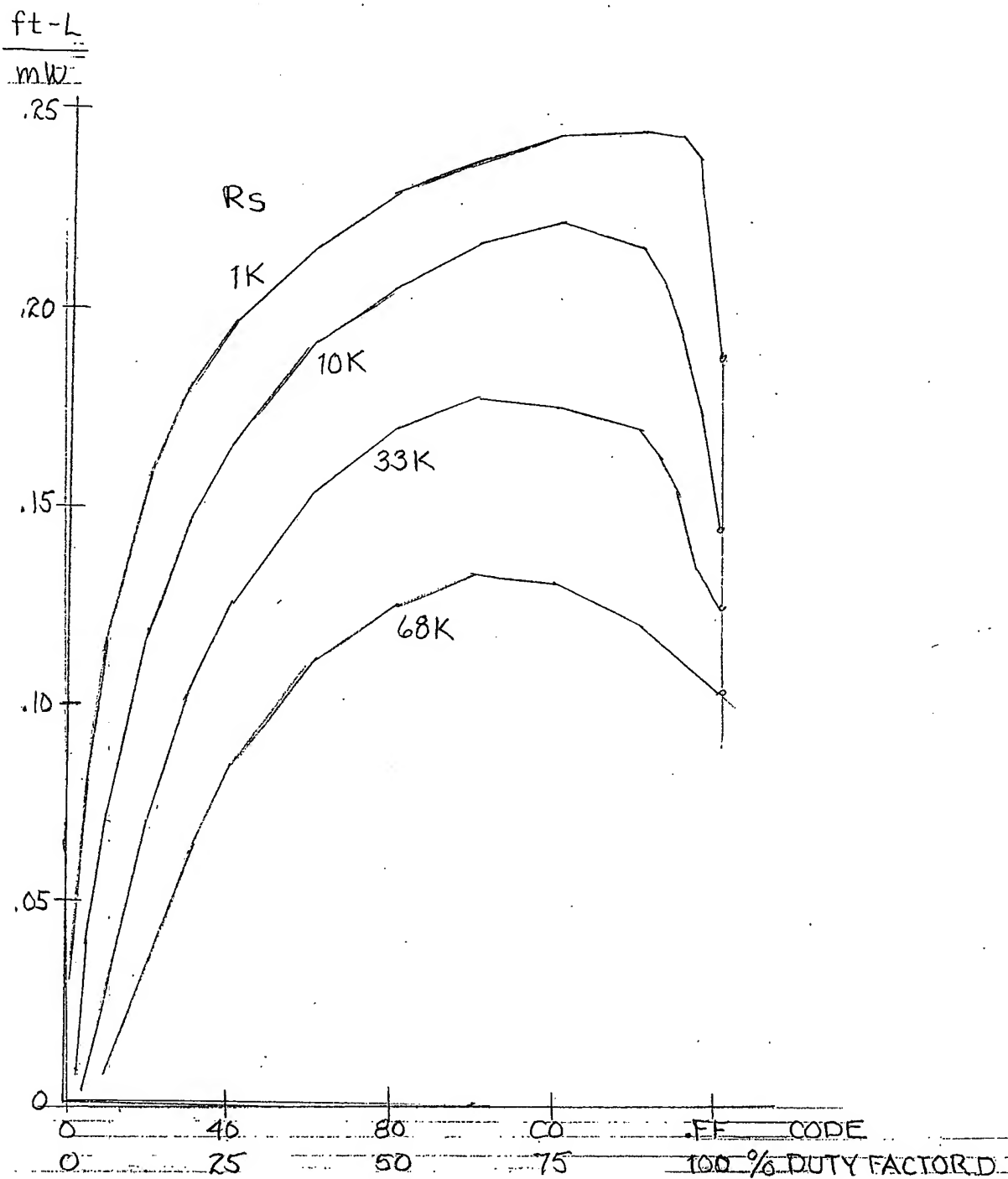


FIG. 10 LAMP EFFICIENCY VS DUTY FACTOR

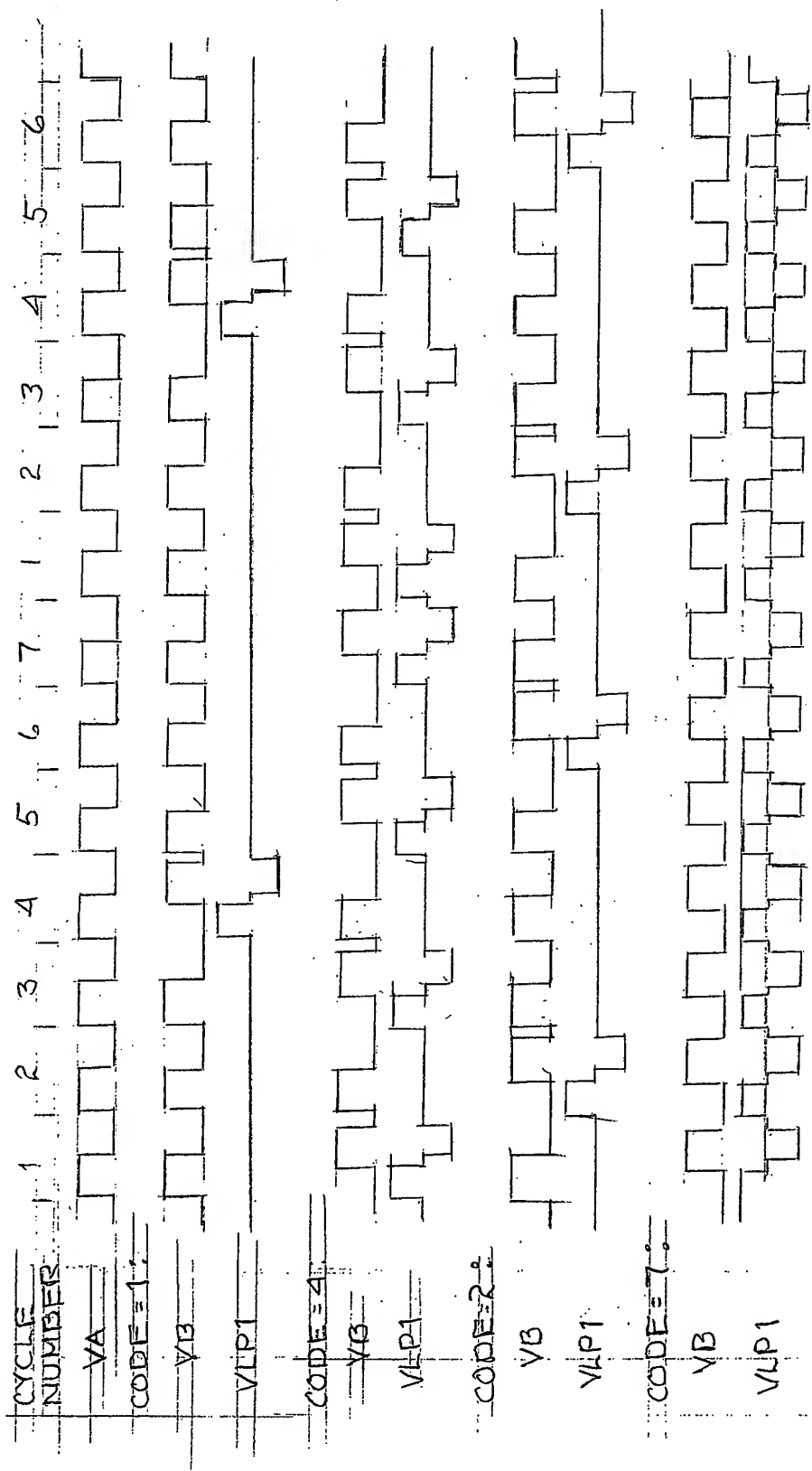


Fig. 11 AVERAGE FREQUENCY CONTROL

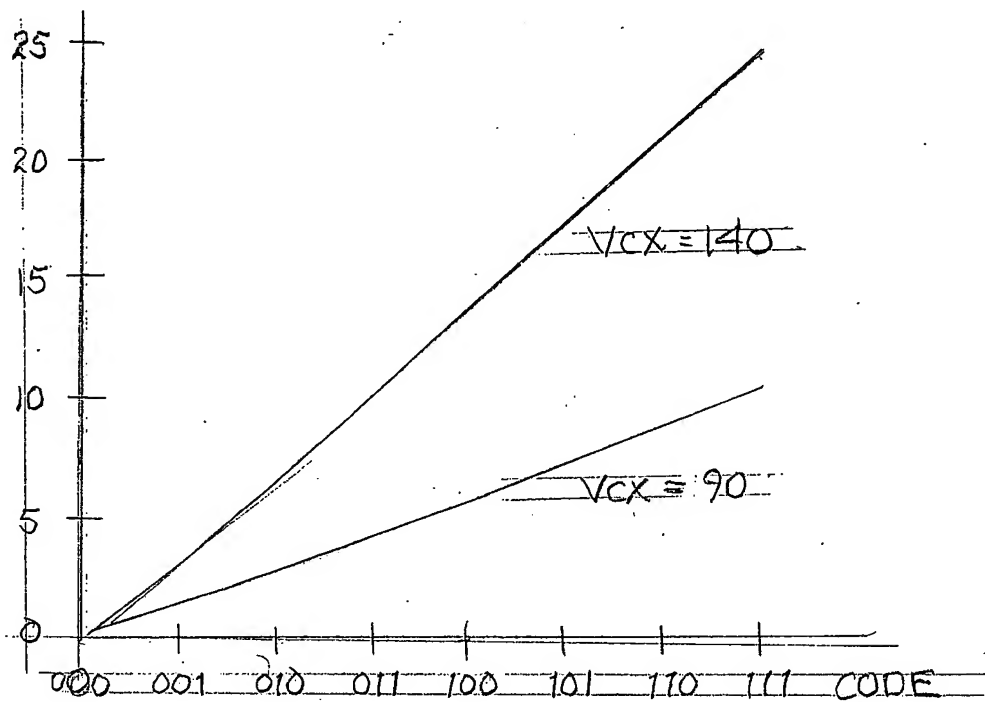


FIG 12 METHOD 2 - BRIGHTNESS

$F = 500 \text{ Hz}$ 19x50 mm LAMP

$R_S = 3.3 \text{ K}\Omega$ 3/4 DUTY PULSES

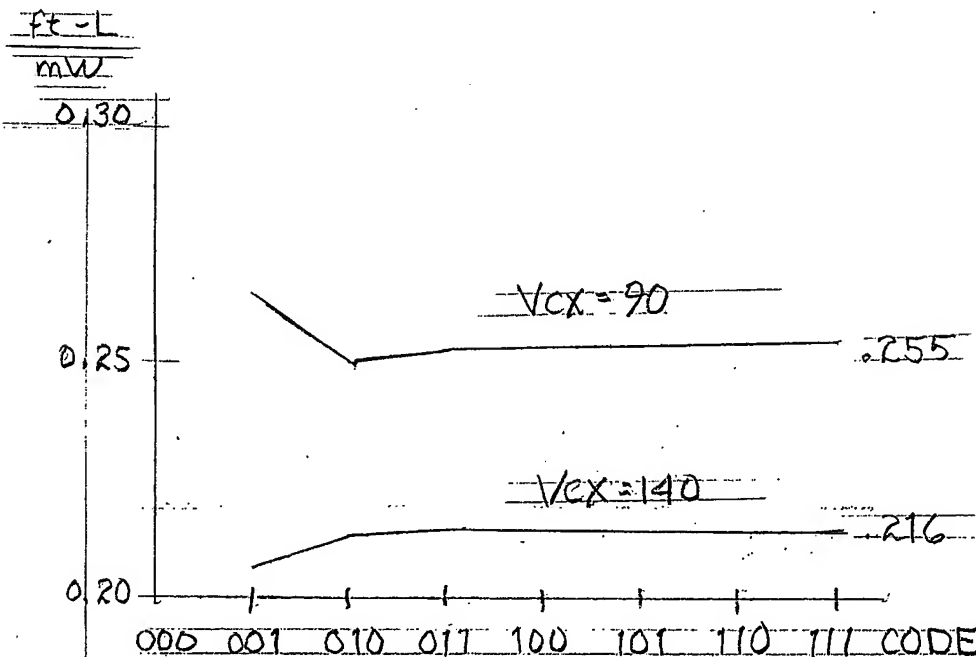


FIG 13 METHOD 2 EFFICIENCY

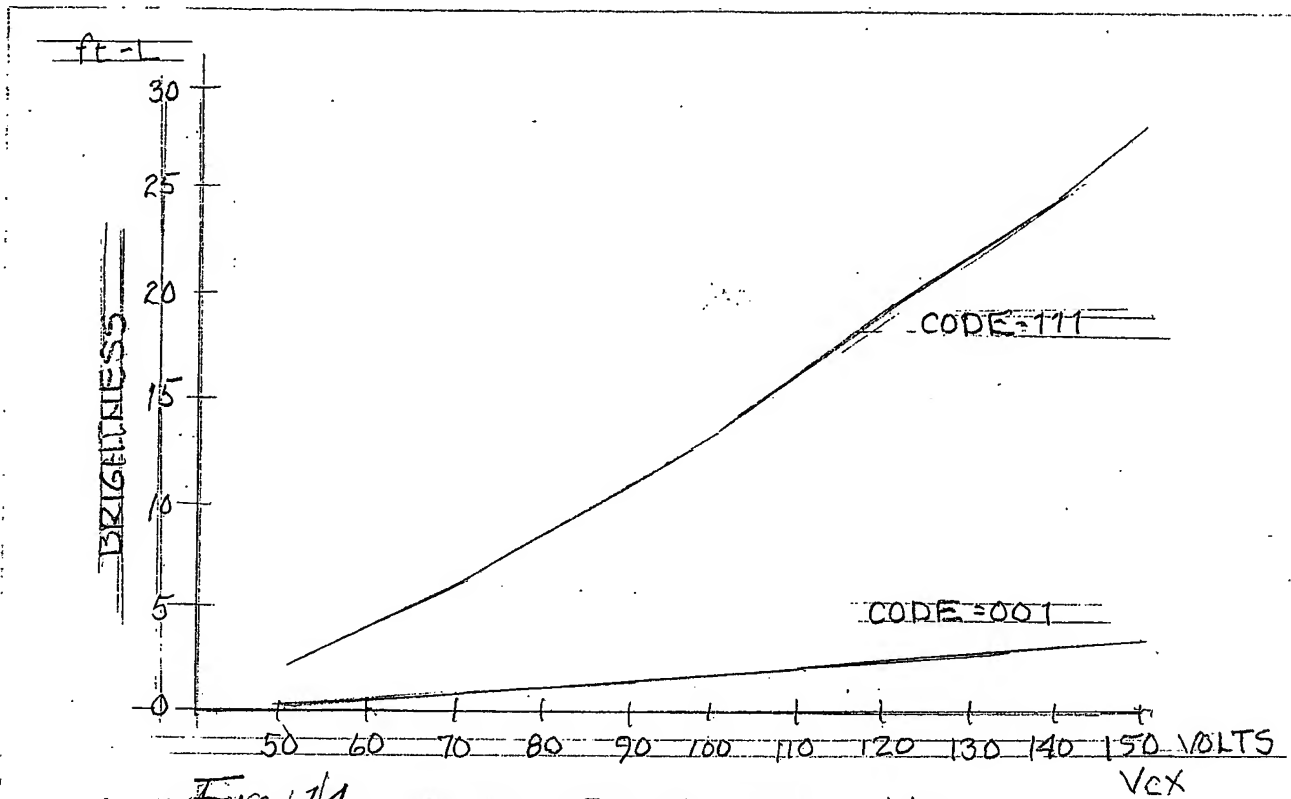


FIG. 14 METHOD 2 BRIGHTNESS VS V_{cx}
 $F=500\text{ Hz}$ 19X50 MM LAMP
 $R_S=3.3\text{ K}$ 3/4, 1/4 DUTY PULSES

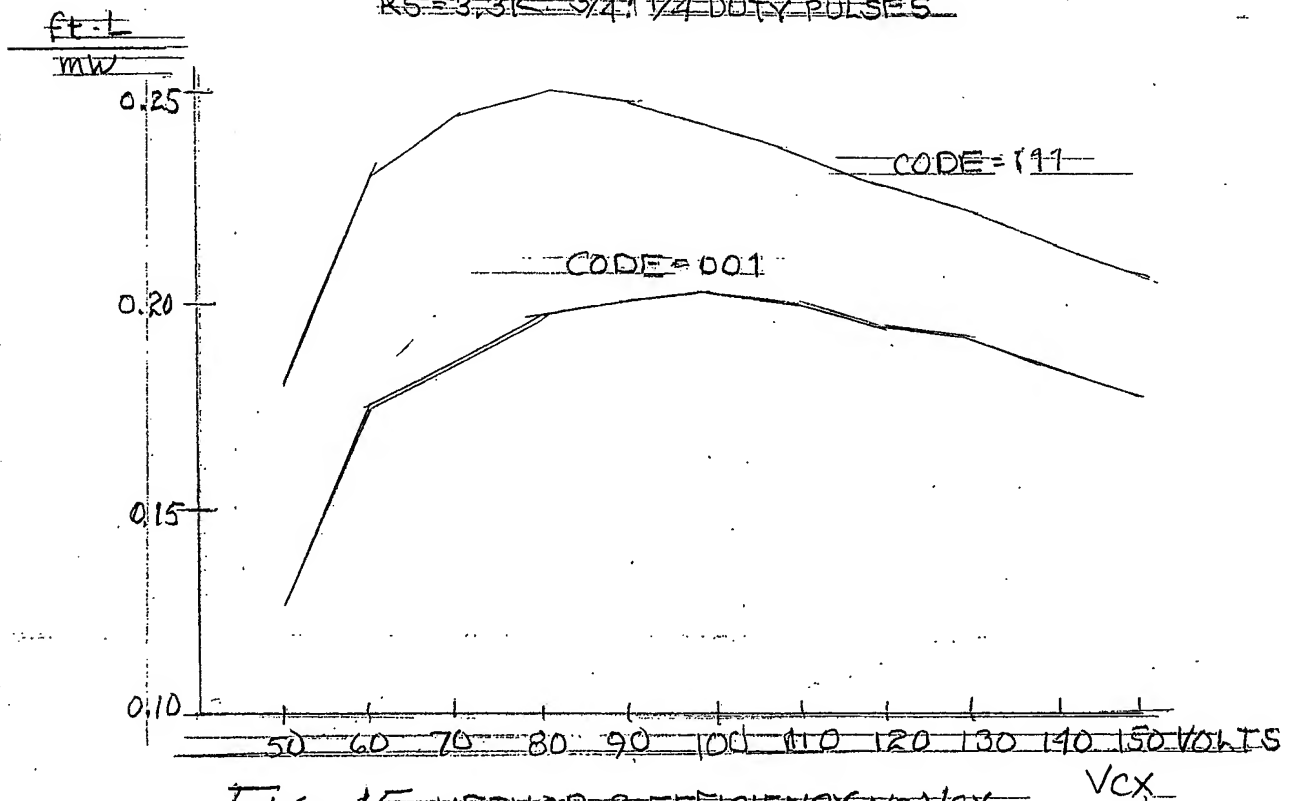


FIG. 15 METHOD 2 EFFICIENCY VS V_{cx}
 $F=500\text{ Hz}$ 19X50 MM LAMP
 $R_S=3.3\text{ K}$ 3/4, 1/4 DUTY PULSES

$f_t = 1$

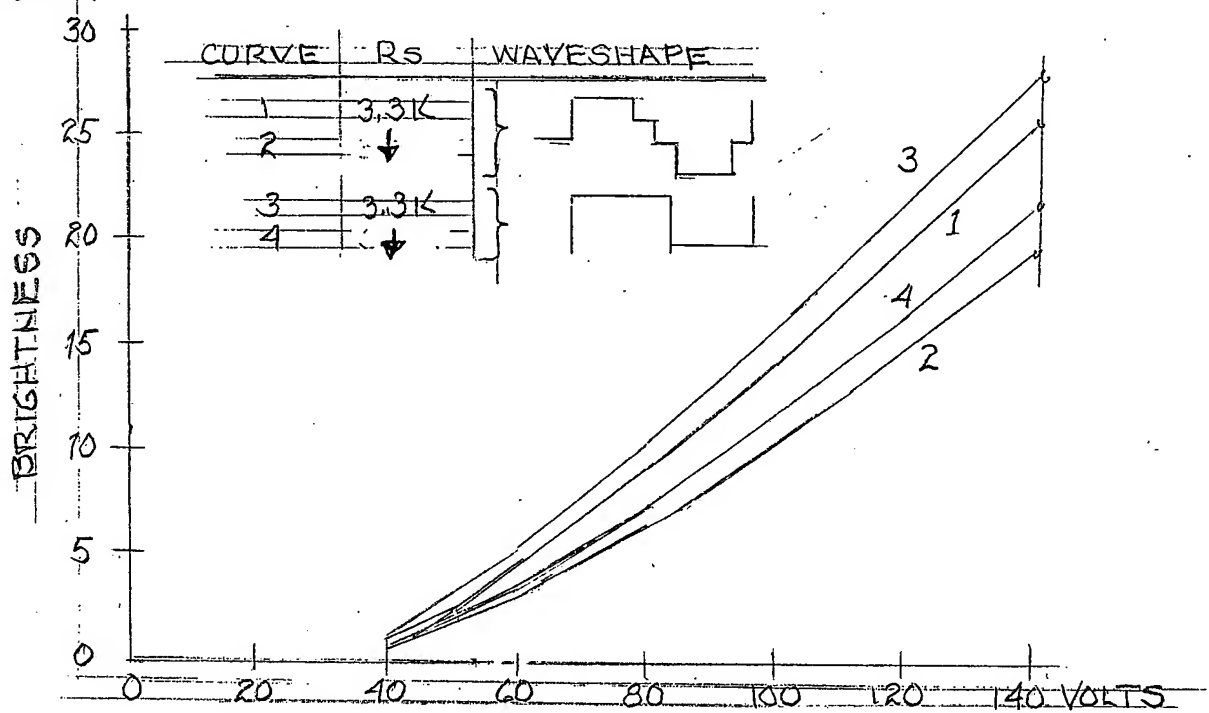


FIG. 16 LAMP BRIGHTNESS VS V_{CX}
 $F = 500 \text{ Hz}$ 19X50MM LAMP

$f_t = 1$
 mw

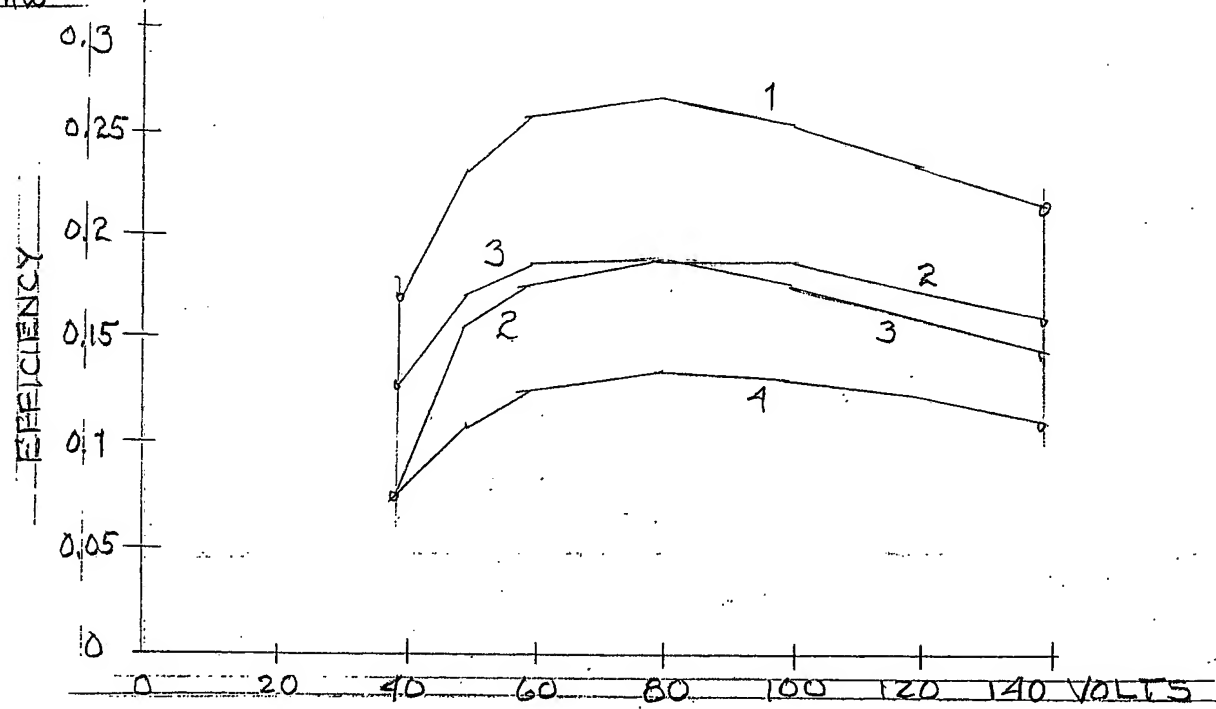


FIG. 17 LAMP EFFICIENCY VS V_{CX}
 $F = 500 \text{ Hz}$ 19X50MM LAMP

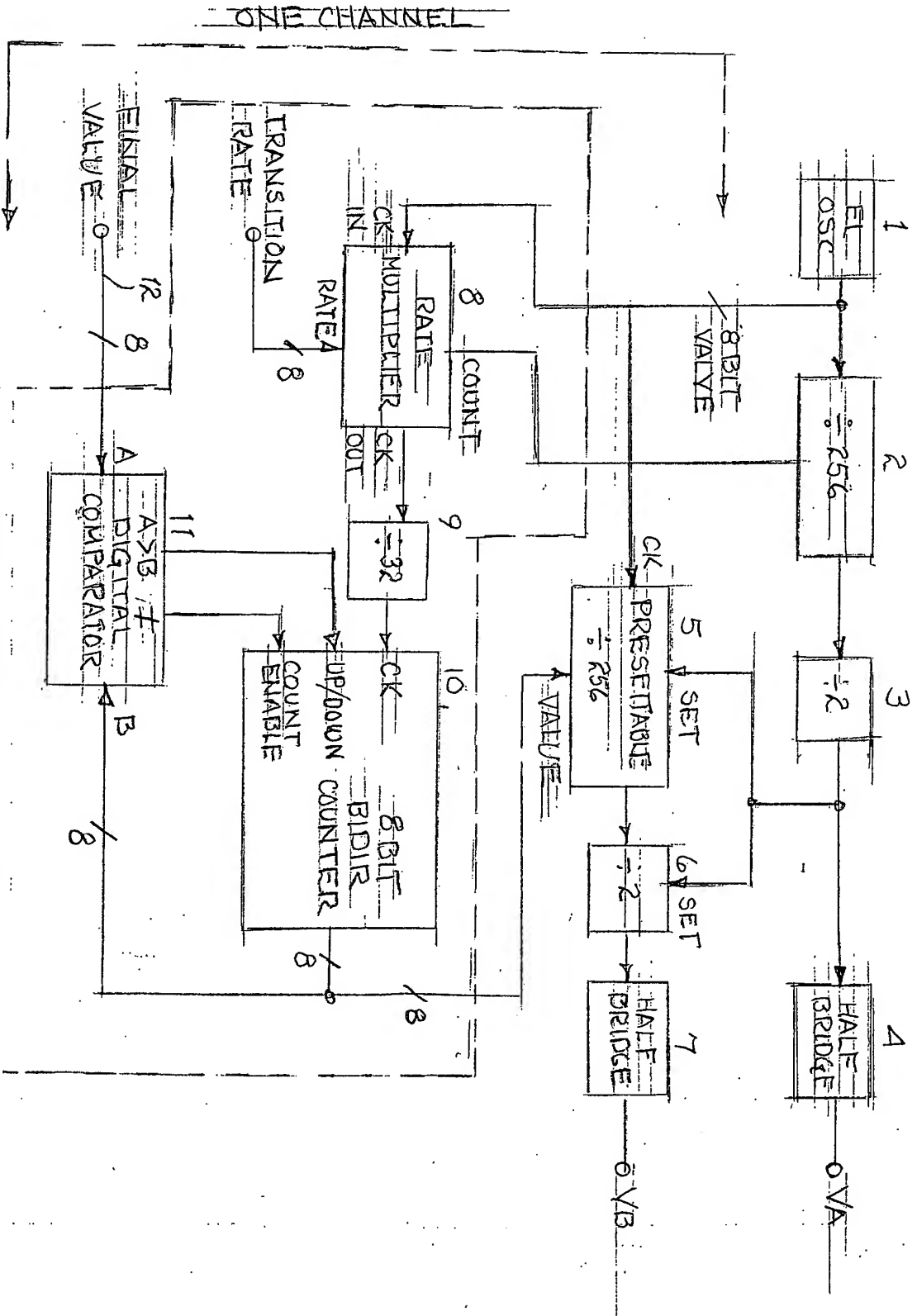
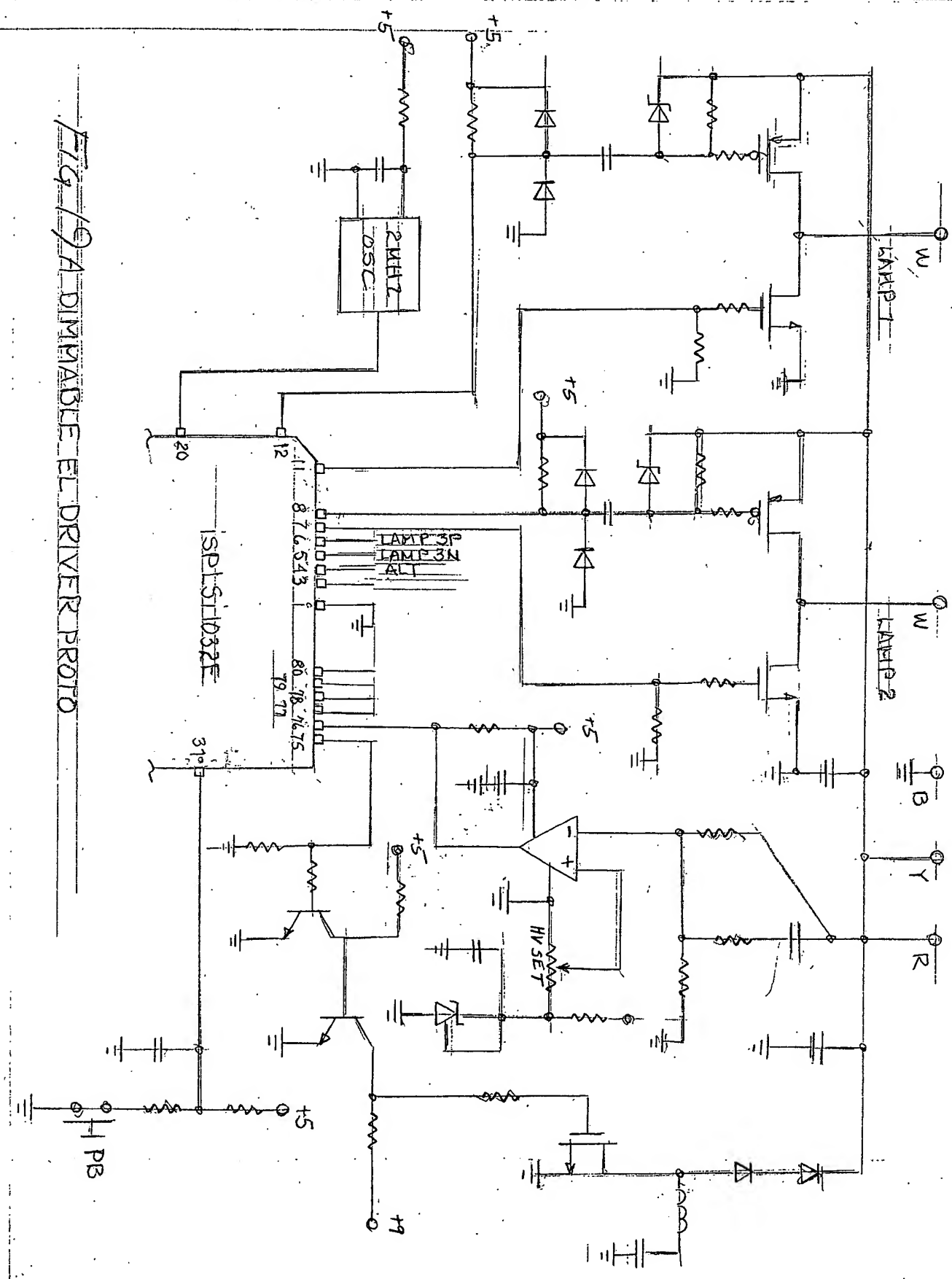


Fig. 18 VARIABLE TRANSITION RATE PHASE CONTROL

FIG 1/9A DIMMABLE EL DRIVER PROTO



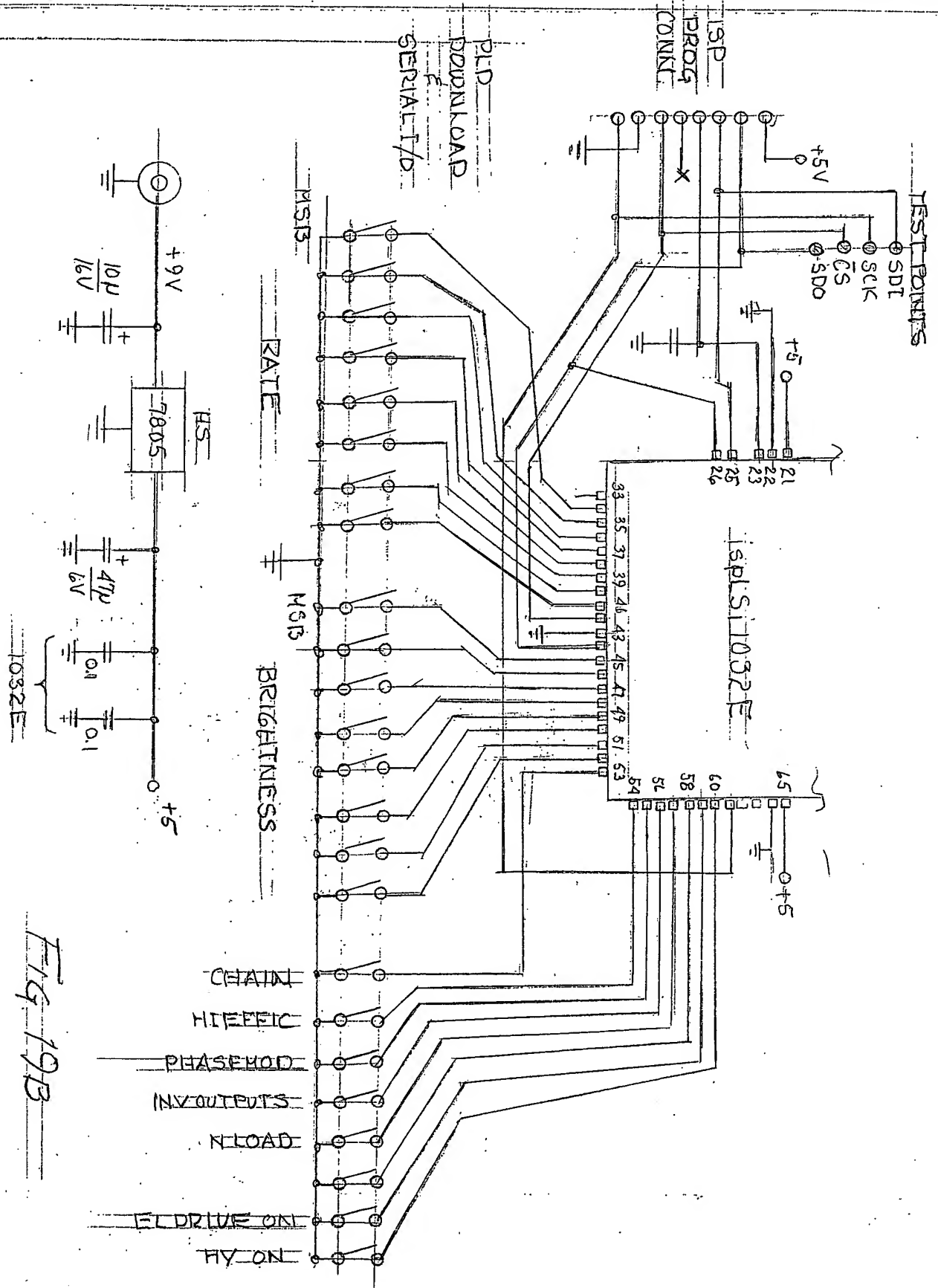


Fig 19B